

Amendments to the claims:

The following claims were previously submitted in the Response filed on May 6, 2004 but deemed non-compliant. They are being resubmitted with the necessary corrections. This listing of claims will replace all previous versions and listings of claims in the application.

Listing of the Claims

1. (Twice Amended) An improved saw blade comprising:
a blade portion having two opposed sides which define a blade width; and
a cutting edge formed on the blade portion, the cutting edge having a cutting tip width;
the blade portion having a high precision surface finish which is less than or equal to approximately 10 Ra, and wherein the surface has reduced residual tensile stress which ~~and is produced obtainable~~ by a process comprising the steps of
providing a high speed centrifugal finishing apparatus having an outer vessel and at least one inner vessel;
placing the saw blade in the inner vessel;
adding abrasive finishing media into the inner vessel; and
rotating the inner vessel at high speed relative to the outer vessel; the high speed rotation causing the abrasive media to surface finish the blades.
2. (Original) An improved saw blade according to claim 1 wherein the saw blade is a straight saw blade and wherein the width of the blade portion is substantially the same as the width of the cutting tip.
3. (Original) An improved saw blade according to claim 1 wherein the saw blade includes an anti-kickback portion located circumferentially behind each cutting tip, and wherein the side surfaces of the anti-kickback portion are finished with a low friction surface.
4. (Original) An improved saw blade according to claim 1 wherein the high precision surface finish is in a range of between approximately 2 Ra and 6 Ra.

5. (Original) An improved saw blade according to claim 1 wherein the high precision surface finish is in a range of between approximately 2 Ra and 4 Ra.

6. (Original) An improved saw blade according to claim 1 wherein the high precision surface finish is approximately 6 Ra or less.

7. (Withdrawn) A method of forming a saw blade having a high precision surface finish which is less than or equal to approximately 10 Ra; the method comprising the steps of
providing a high speed centrifugal finishing apparatus having an outer vessel and at least one inner vessel;

placing a plurality of saw blades in the inner vessel, each saw blade being spaced apart from an adjacent saw blade;

adding abrasive finishing media into the inner vessel;

rotating the inner vessel at high speed relative to the outer vessel; the high speed rotation causing the abrasive media to surface finish the blades; and

removing the blades from the inner vessel.

8. (Withdrawn) A method of forming a saw blade according to claim 7 wherein before the step of adding the abrasive, the method comprises the step of selecting an abrasive finishing media which is harder than the saw blade material.

9. (Withdrawn) A method of forming a saw blade according to claim 8 wherein the abrasive finishing media is softer than the cutting tip material.

10. (Withdrawn) A method of forming a saw blade according to claim 7 wherein the step of placing the saw blades involves providing a central shaft, placing the saw blades on the central rod; and inserting spacers between adjacent saw blades.

11. (Withdrawn) A method of forming a saw blade according to claim 10 wherein before the step of adding the abrasive, the method comprises the step of selecting an abrasive finishing media which is harder than the saw blade material.

12. (Withdrawn) A method of forming a saw blade according to claim 11 wherein the abrasive finishing media is softer than the cutting tip material.

13. (Twice amended) An improved saw blade comprising:
a blade portion having two opposed sides which define the blade portion width;
and

a plurality of teeth formed on the blade portion, the teeth having opposed sides, the teeth having cutting tips formed thereon which have a width, the sides of the teeth having a high precision surface finish which is less than or equal to approximately 10 Ra, and wherein the surface has reduced residual tensile stress which is ~~and is obtained~~ obtainable by a process comprising the steps of

providing a high speed centrifugal finishing apparatus having an outer vessel and at least one inner vessel;

placing the saw blade in the inner vessel;

adding abrasive finishing media into the inner vessel; and

rotating the inner vessel at high speed relative to the outer vessel; the high speed rotation causing the abrasive media to surface finish the blades.

14. (Original) An improved saw blade according to claim 13 wherein the saw blade is a straight saw blade and wherein the width of the blade portion is substantially the same as the width of the cutting tips.

15. (Original) An improved saw blade according to claim 13 wherein the saw blade includes an anti-kickback portion located circumferentially behind each cutting tip, and wherein at least a portion of the anti-kickback portion have a high precision low friction surface finish.

16. (Original) An improved saw blade according to claim 13 wherein the high precision surface finish is in a range of between approximately 2 Ra and 6 Ra.

17. (Original) An improved saw blade according to claim 13 wherein the high precision surface finish is in a range of between approximately 2 Ra and 4 Ra.

18. (Original) An improved saw blade according to claim 13 wherein the high precision surface finish is approximately 6 Ra or less.

19. (New) An improved saw blade comprising:

a blade portion having two opposed sides which define the blade portion width;

and

a plurality of teeth formed on the blade portion, the teeth having opposed sides, the teeth having cutting tips attached to the teeth which have a width, the sides of the teeth having a high precision surface finish which is less than or equal to approximately 10 Ra, and wherein the surface is formed with a compressive residual stress through a process comprising the steps of

providing a high speed centrifugal finishing apparatus having an outer vessel and at least one inner vessel;

placing the saw blade in the inner vessel;

adding abrasive finishing media into the inner vessel; and

rotating the inner vessel at high speed relative to the outer vessel; the high speed rotation causing the abrasive media to surface finish the blades.